

CHILD DEVELOPMENT



Editorial Board

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Published Quarterly by

CHILD DEVELOPMENT PUBLICATIONS

OF THE

SOCIETY FOR RESEARCH IN CHILD DEVELOPMENT

FAYERWEATHER HALL, EAST
Northwestern University
Evanston, Illinois

Made in United States of America



CHILD DEVELOPMENT

Vol. 20

March, 1949

No. 1

Editorial Board

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SOCIETY FOR RESEARCH IN CHILD DEVELOPMENT
ANNOUNCEMENT OF BIENNIAL MEETING

(In conjunction with the A.A.A.S.)

December 28-29, 1949. Hotel New Yorker, New York, N.Y.

Wednesday A.M., December 28—Symposium on *Permissiveness Versus Rigidity in Relation to Child Rearing, Personality and Culture.*

Wednesday P.M., December 28—Symposium on *The Concept of Maturity from the Anatomical Physiological and Psychological Points of View.*

Members may make reservations at the Hotel New Yorker by writing immediately to Miss Sylvia T. Peltoner, Manager—Housing Bureau—N.Y. Convention & Visitors Bureau—500 Park Avenue, New York 22, N.Y.

* * * * *

A Message from the President of the Society

Last January each member received from Dr. Robert Sears a complete report of the meeting of the Joint Committee representing your Society and the Child Development Committee of the National Research Council. A progress report seems in order at the end of this first six months of our new life as an autonomous society.

Immediately following the December meeting your Governing Council approved the appointment of Dr. Thomas W. Richards as Editor-in-Chief and Business Manager for the Child Development Publications and as Treasurer of the Society. They also approved the appointment of Miss Alene M. Gustavson as Assistant Editor and Assistant Treasurer.

Following the resignation of Dr. Carroll E. Palmer in January, the Council approved the appointments of Dr. Robert Havighurst and Miss Ruth I. Cooper as Secretary and Associate Secretary respectively.

As an independent, self-supporting Society we need a complete revision of our Constitution including the problems of officers, Council, Publications, membership, meetings, and dues. A committee consisting of Dr. Celia B. Stendler (Chairman), Dr. Ruth Updegraff, and Dr. Carson McGuire is busy with this task now and will present their report at the next biennial meeting. The members of this committee will be glad to have suggestions from you.

A committee consisting of Dr. Charlotte del Solar (Chairman), Dr. Milton J. E. Senn, Dr. Harry Shapiro, and Miss Ruth Cooper is busily engaged in building an interesting and worth-while program for our next meeting.

May I take this opportunity of urging every member to make plans now for the New York meeting, December 28th-29th. We will consider such important matters as the adoption of a new constitution, the election of new officers, and plans for the future development of the Society. Please mark the dates of this meeting on your calendar.

ALFRED H. WASHBURN, *President*
University of Colorado, School of Medicine
Denver, Colorado

EDITORIAL COMMENT

The current issue of *Child Development* is the first to be published under conditions of a change in editorial organization. Since 1936 this journal (as well as the *Monographs of the Society for Research in Child Development* and the *Child Development Abstracts and Bibliography*) was published under the joint auspices of the National Research Council (through its committee on Child Development) and the Society for Research in Child Development. During the past year the Society has taken over fully the responsibility for all three publications. The *Abstracts* is to be edited in cooperation with the Children's Bureau of the Federal Security Agency, with Isidore Altman serving as Editor.

With reference to all three publications, but with *Child Development* in mind in particular, it seems appropriate at this point to give some expression of editorial policy.

It is our feeling that the three publications, belonging as they do to the Society for Research in Child Development, should reflect the interests of the Society. Its membership is composed of people in many disciplines and professions. Two characteristics of their common meeting ground seem vital: (1) research and (2) interdisciplinary flexibility.

There are those who feel that "child development" is too broad a concept to be considered itself a specialty, and that in this sense the investigator working in child development is bound to have an allegiance more intimate with some one discipline, such as nutrition or pediatrics or anthropology. Others equally vocal seem to feel that, with definition of "child development" such as the study of the growth of the child as an integral unit, this is indeed a specialty, for which a curriculum of training and other functional determinants give unique structure. Within the membership of the Society, both points of view are maintained with validity. We would like, as editors, to keep in this regard a careful neutrality. We feel, however, that the controversy itself serves in great part to structure the editorial task. In these terms we should like to emphasize in *Child Development*—

- (1) Research on children that will be of interest to those in a wide variety of disciplines (as distinct from research within a discipline that would have meaning perhaps almost entirely within that discipline).
- (2) Research that is itself interdisciplinary. This might be an expression of the cooperative effort of scientists in two or more specialties, or of the effort of several investigators of whatever special training to achieve scientific understanding of problems which themselves are interdisciplinary in character.
- (3) Research on the child as an integrated individual with emphasis particularly on development, and the broad implications of such study for children generally.

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- (4) Integrations of research findings in studies of children which will serve to increase understanding, or reduce barriers, between disciplines, and so facilitate cooperative research.
- (5) Research on children which seems particularly significant in the light of the broad problems of the world today. It is the function of publication to bring research out of the laboratory and ivory tower in order to reach not only scientists, but also the larger public which needs to know, in regard to child welfare, the continuous contribution of research.

T. W. RICHARDS
Editor

THE FULL-RANGE PICTURE VOCABULARY TEST: III. RESULTS FOR A PRESCHOOL-AGE POPULATION¹

ROBERT B. AMMONS

Tulane University

and

JAMES CLIFFORD HOLMES

University of Denver

In previous papers (3, 5) in this series, the generally important role of vocabulary items in intelligence testing has been discussed. Vocabulary tests are used at the two- to five-year level, although probably not as often then as later. The 1937 Stanford-Binet (11) measures vocabulary in several ways at the preschool level. Tests include Identifying Objects by Name, Identifying Parts of the Body, Identifying Objects by Use, and Picture Vocabulary.

The Minnesota Preschool Scale (9) contains such indirect verbal items as Pointing out Parts of the Body, Pointing out Objects in Pictures, and Giving Word Opposites. Considerable importance is given to verbal subtests in the Binet and Minnesota Preschool, and even the Cattell Infant Intelligence Scale (8) calls for pointing to the parts of a doll as named by the tester and identifying objects and pictures by name. In contrast to these tests where non-verbal items are also used are the Van Alstyne Picture Vocabulary Test for Young Children (12) and the Full-Range Picture Vocabulary Test (1). Both use only identification-type vocabulary items to measure intellectual ability.

To be really useful, a test must have satisfactory standardization as well as suitable items. A survey of the tests mentioned above reveals a wide range of adequacy in their standardizations. The Minnesota Preschool Scale (9) was given to 900 children, 100 in each of 9 half-year age groups, eighteen months to six years. These children were equally divided as to sex, and their fathers were representative occupationally of the total adult male population of Minneapolis according to the 1920 census. The 1937 Stanford-Binet standardization (11) was based on tests given to 76 to 100 children at each half-year age level two to five and one-half years. The sampling was made fairly representative of the white American-born population on the basis of such criteria as age, sex, geographical location, and parents' occupations relative to the 1930 census.

¹Acknowledgment is due Mr. Neil W. Coppinger, Mrs. Helen S. Ammons, and Mr. Newell H. Berthelot-Berry of Tulane University for reading the manuscript critically and offering many helpful suggestions. The test and manual with final scale norms, answer sheets, and instructions for administration (1) can be obtained from R. B. Ammons.

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The Cattell Infant Intelligence Scale (8) was standardized by retesting 274 children at age levels from three to thirty-six months. Unfortunately, the conditions of the testing were such that a select group of children was obtained, with Stanford-Binet IQ's averaging 118 at the age of 36 months. The sample of children tested by Van Alstyne (12) was even more restricted. Norms are based on results from testing only 80 children, thirty-three to thirty-nine months of age, with an average IQ placing them in the superior range.

From the above discussion it can be seen that vocabulary items are widely used in intelligence tests, even at the preschool age-level. Their utility as measures of general intelligence is indicated by a correlation of .72 between the picture vocabulary MA of the 1937 Stanford-Binet (11) and the full or short scale MA for children under the CA of four years one month. The intrinsic interest value of picture vocabulary tests combined with apparently high reliability and validity (3, 5, 12) recommends them for clinical use.

PROBLEM

This investigation was concerned with the standardization of the Full-Range Picture Vocabulary Test on a preschool-age population. This involved the following: (a) Choice of suitable preliminary items for each set of pictures.² (b) Preliminary testing and item analysis for the purpose of deriving a tentative scale for use in standardization. (c) Testing a sample of preschool-age children which could be considered relatively representative of the United States preschool-age white population. (d) Selecting the best items for final scales. (e) Constructing equivalent final forms of the test. (f) Calculating norms based on these final forms. (g) Determining the reliability and validity of the two forms.

PROCEDURE

Materials: Testing was done with 16 plates, 8½ by 11 inches, each with four cartoon-like line drawings. Common objects, human activities, and familiar scenes are pictured in the series, several pictures from which are reproduced in Ammons and Huth (3). Standard 1937 Stanford-Binet materials (11) were used for the Binet testing.

Test words for the picture vocabulary were obtained from two sources. Ammons and Huth (3) tested 52 children with a large number of words, and 48 of their best items were retained. As a part of the standardization project 243 more items were listed. Of these, 43 were eliminated by group discussion and the remaining 248 were pretested by the group (2, 4, 5, 6, 7) on children of CA's two through seventeen, as well as 20 adults of a wide range of intelligence. A total of 226 was retained, of which 62

²Steps a, b, and c are described in detail elsewhere (5).

were approximately of suitable difficulty for CA's two through six. Words were eliminated on the following grounds: failure to discriminate between successive age levels, technical meaning, regional meaning, ambiguity of reference, duplication, too many at a level, and differences in difficulty for the sexes.

The 226 words in the tentative scale were arranged by plates, and within plates by difficulty. Difficulty was calculated as the approximate 1937 Stanford-Binet vocabulary MA level at which 50 per cent of the pretest groups would have passed. The items are listed in Ammons and Rachiele (5), where a more complete account of their discovery and selection is also given.

Thus, testing was done with 16 plates, 226 pertinent words, and Form L of the 1937 Stanford-Binet.

TABLE I
MEAN CHRONOLOGICAL AGES AND STANDARD DEVIATIONS OF AGES BY CA LEVEL, SEX, AND FOR THE SEXES COMBINED FOR THE PRESCHOOL STANDARDIZATION SAMPLE

CA level	Male			Female			Combined Sexes		
	N	M*	SD*	N	M	SD	N	M	SD
2	15	29.7	3.2	15	30.4	3.9	30	30.0	3.6
3	15	42.4	3.8	15	40.5	3.7	30	41.5	3.9
4	15	53.5	3.7	15	52.9	4.1	30	53.2	3.9
5	15	65.1	2.4	15	64.7	2.9	30	64.9	2.7

*Means and standard deviations computed in months.

Subjects: The sample was controlled for age, sex, race, and occupational status of parents. Fifteen boys and 15 girls were tested at each chronological age level, two through five, making a total group of 120 children. Age was figured in years, with the two-year group running from 23 months 16 days to 35 months 15 days, for example. No direct attempt was made to control age within year spans. The average ages of the four groups were 30.0, 41.5, 53.2, and 64.9 months. A summary of age information for the group appears in Table I. Only native-born white children were included, and all were from Denver or the neighboring agricultural area.

Special care was taken with respect to control of family socioeconomic status, using occupational information. Since the fathers of preschool-age children are on the average younger than the total population of adult

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males, the general census occupational distribution is not accurate for them. The occupational breakdown finally used was the employment table from the 1940 census (14b) for husbands of native white women with children under five years of age. This was felt to provide an excellent sampling basis, although parents of five-year-olds are excluded.

Information as to father's occupation was obtained from school records, welfare records, and direct questioning of parents. The 1940 census classification of occupations (14a) was used to place fathers in ten major occupational categories. An attempt was made to make the sample of children for each age level and sexes within levels as representative as possible with respect to father's occupation. Table II shows the occupational categories used, numbers of children tested with fathers falling in each, and number of fathers in each in the total population. It will be seen that the age-sex control was well maintained and that the overall percentages tested are very close to those in the criterion population. The final sample omits Negro children, children whose fathers' occupations were not reported, and "other white children," an estimated total of 27 per cent of the whole child population.

Children were obtained from many sources for testing.³ Forty-four were from public day-care centers for the children of working mothers, 9 from private nursery schools, 15 from a Catholic charities day nursery, 24 from farms, and 28 from a variety of sources such as homes where a sibling had already been tested, and families contacted in public parks.

Testing: All children were given the 1937 Stanford-Binet and the Full-Range Picture Vocabulary Test. Testing was done by qualified graduate students who had been carefully instructed and checked as to proficiency in testing. The standard procedure as given by Terman and Merrill (11) was used with the Stanford-Binet.

In administering the picture vocabulary, all 226 preliminary items were administered, while final scores were computed from the items actually chosen for the final forms of the test (5). The child was ordinarily seated comfortably across a table from the examiner. He was told that he would be asked to point to some pictures and the first plate was shown with the question, "Where is the pie?" If he seemed not to understand the procedure, further questions were asked using words other than those in the 226-item scale and creating a game-like atmosphere until he clearly saw what to do. Testing started with the easiest item on each card, and proceeded until all items had been failed at three successive MA levels. It was assumed in scoring that all subsequent items would have been failed. Questions were varied to avoid monotony, the examiner saying "Put your finger on the ———," "Where is the ———," or "Show me the ———."

³Acknowledgment is due Miss Betty Johnson of the Denver Bureau of Public Welfare, Miss Alice Read of the Jack and Jill House, and Sister Salome of the Margery Reed Day Nursery for their willing and excellent help in the obtaining of the children for testing.

TABLE II

NUMBER OF SUBJECTS USED IN THE PRESENT PRESCHOOL-
AGE STANDARDIZATION BY OCCUPATIONAL GROUP,
AGE, SEX, AND PERCENTAGE OF TOTAL
PRESCHOOL-AGE SAMPLE

Occupational group*	Age and Sex								Actual per cent tested	Census per cent**	
	Two		Three		Four		Five				Total
	M	F	M	F	M	F	M	F			
Professional and semi-profes- sional	1	1	1	1	1	1	1	0	7	5.8	5.5
Farmers and farm managers	3	2	2	3	2	2	2	3	19	15.8	16.2
Proprietors, man- agers and officials	1	1	2	0	1	2	1	2	10	8.3	8.1
Clerical, sales and kindred	2	1	2	2	2	2	1	2	14	11.7	11.4
Craftsmen, fore- men and kin- dred	2	2	3	2	2	2	3	2	18	15.0	15.3
Operatives and kindred	4	3	2	4	4	3	4	3	27	22.5	22.3
Service workers	0	1	1	0	0	1	0	1	4	3.3	3.3
Farm laborers and foremen	0	1	1	1	0	1	1	0	5	4.2	4.5
Laborers, except farm and mine ..	2	3	1	2	3	1	2	2	16	13.3	13.3
Total	15	15	15	15	15	15	15	15	120	99.9	99.9

*From the 1940 census (14a).

**These percentages were computed from the 1940 census (14b) for husbands of native white women with children under five years of age, derived from Table 41.

Guessing presented a special problem. It was seldom possible to eliminate it by verbal instructions, so other methods were used. The child was frequently asked in a friendly way why he had chosen a particular picture, or merely "Is *that* the —?" Doubtful items were repeated later in the test. It was found possible to minimize guessing and maintain satisfactory rapport by avoiding long series of failures. Wherever the examiner felt it

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would help, he was free to put in easy words not in the scale. In this way, a set for careful answering was maintained.

Testing was done in special rooms in the day-care centers and nurseries. When it was necessary to test in a private home or park, a relatively isolated place was found, and the necessity for non-participation was impressed upon the parents and other family members. Little difficulty was encountered on this score.

RESULTS

An idea of the representativeness of the sample can be obtained by comparing mean IQ's for the standardization group with those reported by Terman and Merrill (11) for their group. The mean 1937 Stanford-Binet IQ's were 102.1, 101.5, 105.4, and 103.8 for our four groups which averaged 30.0, 41.5, 53.2, and 64.9 months of age. IQ's from the Binet standardization group were 109.9, 108.0, 103.7, and 101.4 for groups approximately 30, 42, 54, and 66 months of age. Our groups' average Binet IQ's compare quite favorably with those of the original Binet groups.

To select items for the final forms, the number passing each word at each age level was counted, and words showing ambiguity of reference, sex differences in difficulty, poor ability to discriminate between successive age groups or regionality of meaning were eliminated. On the basis of difficulty estimated from the 50 per cent passing level, the following words were kept for Form A:

- below 2 years:* pie, window, horse, clock, bed;
- 2 to 3 years:* wagon, firecracker, telephone, crying, newspaper;
- 3 to 4 years:* clothes, locket, numbers, accident, propellers;
- 4 to 5 years:* counter, pump, explosion, farm, furniture;
- 5 to 6 years:* clean, hot, danger, steel, refreshment.

The following words were kept for Form B:

- below 2 years:* car, bird, bathtub, train, airplane;
- 2 to 3 years:* spoon, fight, fly, circle, policeman;
- 3 to 4 years:* vegetable, phonograph, music, razor, operation;
- 4 to 5 years:* meal, human, dessert, laundry, thermometer;
- 5 to 6 years:* paying, island, listening, broadcast, uniform.

A more extensive discussion of the item selection procedure and items for higher age levels is given in Ammons and Rachiele (5).

Once the final items had been chosen, the number of them passed by each child on each form was computed. Tables III and IV show the mean score and standard deviation for each age, and for sexes separately for the two forms. It can be seen that there is a very close correspondence in diffi-

TABLE III

MEAN SCORES AND STANDARD DEVIATIONS FOR THE PRESENT PRESCHOOL-AGE STANDARDIZATION GROUP
FOR FORM A OF THE FULL-RANGE PICTURE
VOCABULARY TEST BY CA LEVEL, SEX,
AND FOR THE SEXES COMBINED

CA level*	Male		Female		Combined sexes	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
2	6.1	3.2	6.7	3.0	6.4	3.1
3	11.6	4.6	12.1	2.3	11.8	3.6
4	17.4	3.6	15.7	4.1	16.6	3.9
5	20.9	4.0	21.0	4.8	21.0	4.4

*See *Subjects* section for actual mean ages.

TABLE IV

MEAN SCORES AND STANDARD DEVIATIONS FOR THE PRESENT PRESCHOOL-AGE STANDARDIZATION GROUP
FOR FORM B OF THE FULL-RANGE PICTURE
VOCABULARY TEST BY CA LEVEL, SEX,
AND FOR THE SEXES COMBINED

CA level*	Male		Female		Combined sexes	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
2	6.1	2.9	6.7	2.4	6.4	2.7
3	11.9	4.5	11.4	3.2	11.6	3.9
4	17.5	3.4	15.6	4.5	16.5	4.1
5	19.5	4.3	21.1	5.3	20.3	5.0

*See *Subjects* section for actual mean ages.

culty level between the two forms, and a clearcut age progression in scores. There are no sex differences in the age means significant at even the ten per cent level of confidence. The final norms (*x*) at this age level are based on these tables.

To obtain an estimate of the reliability of the test, the scores on the two forms were correlated. Product-moment correlations of scores between the

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forms were .76, .79, .83, .78, and .93 for age levels 2, 3, 4, 5, and the whole group respectively. Stanford-Binet MA and picture vocabulary scores correlated .85 for Form A and .83 for Form B for the whole range of talent, indicating a satisfactory validity. Another estimate of validity can be obtained from a comparison of the mean scores of successive age groups. All pairs of means of adjacent age groups show marked regular differences in favor of the older group. The final evidence for validity comes from clinical application. The test has been used with approximately 50 "problem" children at the University of Denver Psychological Service for Children, and in the authors' opinion it works well enough to justify using it in place of the Stanford-Binet in many cases.

DISCUSSION

The separate forms of the picture vocabulary test are reasonably reliable and valid at the preschool ages, although reliability and validity are higher for school children (6). Persons wishing to raise the reliability can administer both forms, giving the test a predicted reliability of about .89 for each age group. By administering forms at the start and finish of psychological examinations the rapport value of the test can be exploited and estimates of fatigue and interest fluctuations obtained.

The test lends itself excellently to clinical work, since it has a higher interest value than other tests of verbal ability, takes only five to ten minutes to administer, and measures verbal ability without calling for verbal production on the part of the child. Here, as in all testing of small children, success is dependent on the skill of the tester. It should be noted in this connection that pictures are not as meaningful to the lower age groups as they are later on.

The picture vocabulary test is well adapted to longitudinal studies of intelligence. The similarity of the ability measured from level to level should make for results superior to those obtained when two or more tests are used at different levels (13). It should be possible better to predict later intelligence and study changes in intellectual level than has been possible with the tests available up to now. There would be no necessity in such studies to try to integrate results from tests with heterogeneous subject-matter and methods of testing.

SUMMARY AND CONCLUSIONS

The present problem was the standardization of the Full-Range Picture Vocabulary Test on a representative preschool-age population. A sample of 120 American-born, white children ranging in age from two through five years was used. Fifteen boys and 15 girls were tested at each CA level. Occupational status of the father was a further basis for selection. Numbers of children tested were in proportion to the percentages of each occupational

group found in the population of fathers of preschool-age children for the entire United States, as derived from the 1940 census. The children were tested mainly in public and private nursery schools and in urban and rural private homes.

The results of the standardization include: (a) two equivalent forms of the Full-Range Picture Vocabulary Test with a reliability coefficient of .93 for the preschool-age range and (b) separate norms for Forms A and B of the test by age and sex and also for the combined sexes at each age level. The correlations between the Full-Range Picture Vocabulary Test and the 1937 revision of the Stanford-Binet were found to be .85 for Form A and .83 for Form B.

It can be concluded that scores on the Full-Range Picture Vocabulary Test, as standardized, provide a highly reliable and valid estimate of verbal intelligence for native-born, white preschool-age children from urban and rural areas of the United States. The test is easily administered and quickly scored, and has considerable interest value for small children. Since answers can be given non-verbally, it is suitable for testing children who cannot or will not talk.

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A STUDY OF SOME SOCIO-MORAL JUDGMENTS OF JUNIOR HIGH SCHOOL CHILDREN

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This is an investigation of certain socio-moral judgments held by adolescents with regard to property. Specifically it will be an attempt to see whether high school juniors differ in their judgments on the act of stealing from a large corporation and stealing from a private individual. Observations of the behavior of adults in our industrial society would seem to indicate that this is a problem of major concern. Industrial concerns report each year that tremendous quantities of goods mysteriously disappear from factories and cannot be accounted for. All around us former G.I.'s wear pea coats, windbreakers, aviators' jackets, or other articles of apparel, the ex-serviceman's legal right to which might be questioned. It would appear there are large groups of people who are disregarding or have disregarded traditional moral and legal principles.

The problem of what is right and what is wrong with regard to property is one small aspect of the problem of redefining moral values in an industrial age. When the face-to-face relationships of an agrarian society were the order of the day, or when locally owned and paternalistically managed factories prevailed, it was much easier to apply traditional moral principles in making a distinction between what was stealing and what was not stealing. In a large industrial civilization relationships are impersonal and complex ethical norms, which once were adequate and which were considered absolute, are increasingly losing their efficiency.

Particularly is it difficult to apply traditional norms toward those remote groups in our society whom we never see and with whom we have no intimate contact. As Sorokin ably puts it:

As the social distance between us and other human beings increases, the intensity of our solidarity progressively decreases. The intensity of our solidarity and love, especially in our actions, is considerably lower to persons and groups even of the same town or city than in regard to our family and friends; it becomes still lower in regard to the other citizens of our state; and still less intense toward people as remote as the Chinese and Tasmanians. . . .

Our interaction with these distant peoples is at best only indirect and discontinuous; our interdependence is remote and often intangible. We are not taught as persistently, as early, and as deeply the norms of love for them; we are taught to be indifferent and even inimical to them. Our norms and other values are predominantly diver-

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gent, in a considerable part discordant with theirs; we rarely practice the norms of the Golden Rule in regard to them or they in regard to us. . . . The more a given person or group is a "stranger" to us, the more discrepant are his norms from ours, the weaker is our sympathy to such persons and groups. (10)

While Sorokin does not specifically mention large corporations one can see how the basic principle he has enunciated might apply. What would be regarded as an act of stealing from a private individual may not be considered wrong when a corporation is involved, because of the factor of social distance.

The problem is further complicated because, not only do we have the difficulty of working out values in an impersonal setting, but we also have the problem of coping with a tremendous shift in the basis of values. Over a period of the last 100 years some fundamental changes have been taking place in our thinking about how values are derived. Where formerly it was believed that moral values were logically independent of empirical factors, we now have considerable support for the position that ethical norms are culturally derived. The first position would state that moral laws are not derived out of experience, and that neither do they vary with experience or with situations. As Kant puts it, God and the soul and matters of morality are not verifiable within experience but belong to "the things-in-themselves." (6) Furthermore, these moral laws were absolute, universal, and frequently had the sanction of supernatural authority.

While the position that moral values are relative is not new philosophically, it received tremendous impetus during the latter half of the 19th century, partly as a result of the teachings and writings of Marx. In him we find an adherent of the second position that moral values are socially conditioned. Marx maintained that man produces certain principles or ideas in conformity with his social existence, and that the most important factor in determining these ideas is the social relations man enters into as a result of his means of earning a living. Consequently, values will vary from group to group according to a group's relationship to the means of production. Proletarian and bourgeois will differ in their moral principles because they differ in their relationship to the means of production. Furthermore, since these relations are transitory, the principles or values growing out of them are also transitory. They will vary in different historical periods and with different groups of people; there are no absolute, eternal values. (8)

From anthropological studies in the latter part of the 19th century, and continuing to the present time, has come an overwhelming body of evidence to support the theory that moral values are not absolute but are socially conditioned. To learn that such practices as the killing of children, human sacrifice, abandoning of the aged to starvation, homosexuality, mas-

turbation, lying and stealing, may be accepted mores in certain primitive tribes is shattering to the notion that truth is fixed, eternal and universal.

Not only do mores differ from society to society, but changes within the economic structure of a tribe can bring about changes in the value-systems of tribal members. This has been clearly demonstrated in the case of the Tanala, a primitive tribe living on the Island of Madagascar. For generations the tribe carried on a practice of communal farming, with the land owned by all, and with all members of the tribe in positions of relative equality to one another. The introduction of the technique of wet rice cultivation brought shattering changes in this primitive culture. The simple democracy of the people disappeared and in its place a class society of land-owners, landless and slaves appeared. Marriage institutions, political institutions and even methods of war-making were radically altered, and values once held important in the tribe were supplanted by new and markedly different ones. (7)

But evidence from anthropological studies might not have carried such weight if it had not been for the fact that supernaturally conceived notions of good and evil had been losing ground during this same time. It might have been argued, "Because primitive tribes kill babies, or because values change with economic conditions in primitive societies the claim that our values are fixed and eternal is not necessarily invalidated. It might prove that ideas of right and wrong are not instinctive and not universal, but [the argument would go] it doesn't prove that they are relative because, after all, primitive people are God-less people who have not received the Word. In more civilized societies ideas of right and wrong are fixed and eternal because they are revealed by God." This argument, however, was not as powerful as it might once have been. The work of Darwin in proving the evolution of man from primitive forms had raised doubts regarding the Biblical story of creation and, correspondingly, doubts as to the supernatural origin of moral values. Increasingly we find people accepting the notion of the social conditioning of ethical norms.

Acceptance of the relativism of moral values has not settled the problems of mankind. Indeed, it may have seriously aggravated them. For relativism has given rise to the position that, if our values are culturally derived and if there are no fixed and eternal truths, then whatever the majority of people is doing is the right thing to do. In other words, the basis of moral values would be by majority vote. If Kinsey says most upper-class males carry on such-and-such sexual practices, then that makes these practices morally acceptable. Perhaps a good deal of the conformity which sociologists tell us is stressed in modern society is due to the fact that modern man, having no absolutes, feels compelled to make an absolute of being like his fellow men.

Another grave consequence of relativism has been that modern man has tended to become extremely cynical. If moral principles are culturally de-

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rived, and if they have their basis in experience, then ideas and interest are interrelated. Since groups vary in their experiences, the crystallizations of those experiences in the form of values will differ. Therefore, man does not help his fellow man out of love for him, but simply because it is to his interest to do so. There are no nobler motives; man is prompted to act because his action will be rewarded. "He did that because he's just trying to get in good with someone," would be a popular expression of this cynicism.

The dilemma of modern man toward the problem of moral values is well illustrated in his relationship to property. Whereas in agrarian society it was fairly easy to apply the commandment "Thou shalt not steal," in industrial society the solution is not so simple. This is apparent in the study done by Jones in "Life, Liberty and Property." (4) He was interested in studying the relationship between certain attitudes and opinions and the "position in life" of the persons involved. Because corporate property plays such an important part in modern life, he chose to investigate attitudes toward it with the expectation that if there were differences in attitudes among social groups, these differences would be found here. Seventeen hundred adult residents of Akron were interviewed; they were told stories which described a struggle in which one side was working to protect the interests of corporate property and the other side the interests of an individual. Results showed some interesting differences between social groups in their attitudes toward corporate property as compared with private. An industrial magnate, for example, differs from a C.I.O. member in his attitude toward the use of tear-gas bombs in a sit-down strike. Industrial executives and business leaders hold an attitude closely corresponding to their economic position. The workers, and C.I.O. workers particularly, also hold attitudes corresponding to their economic position but not as clearly defined as the business leaders. The middle groups show a greater tendency toward divergence in their attitude toward corporate property.

Interestingly enough, the influence upon moral development of conditions growing out of an industrial society has received little attention in research with children. In Vernon Jones' discussion of character development (5), he analyzes the influence of intelligence, chronological age, sex, accidents and brain diseases, volitional factors, the home, associates, day schools, reading materials on children, and summarizes the research findings on these factors, but in the research he reports there is no attempt made to view moral development in a total cultural setting. Problems of lying and cheating and stealing are discussed as if there were absolutes in terms of which one might make decisions.

The classic work of Hartshorne and May (3) also fails to take into account the cultural nature of honesty and dishonesty. As a result of their extensive studies they came to the conclusion that there is no generalized trait of honesty, but that it is highly specific. A given child may refrain from cheating under certain circumstances, but cheat under others. Similarly, he may steal on one occasion but refrain from stealing under others.

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The tests, however, were not constructed to test whether there might be a generalized factor operating in connection with honesty—the factor of who owns the property, an individual, the public, or a corporation.

In addition to the Jones study already discussed, there are two pieces of research on attitudes toward property where attention was given to the factor of who owns the property. One of these was a study by Waites (11) on the attitudes of adults toward property in a Lancashire, England, urban area. Choosing a group of 250 adults of both sexes, ages 21-70, who worked in the mills of a certain area, he explored three attitudes toward personal and public property: lending, damaging, and stealing. The adults were asked to arrange in order of seriousness various items under each category and to give reasons for their decisions. The order was found to depend on the amount of ego-involvement in the situation. Public property was put low on the lists, particularly when there was a contrast between "we" and "ours" and "they" and "theirs." There was a local pattern of choice, which indicated that results from other sections of the country might not coincide with these. He concludes: "If this be so, then the acquisition of property is a habit complex by which we select objects that satisfy our fundamental needs. The factor determining which objects we select for possession and which are rejected depends upon the culture pattern, modified by individual differences, in which we have been reared. Being, therefore, children of the culture, attitudes toward property will change with the culture."

The second study of stealing involving who owned the property was made by Eberhart (2). He tested 100 boys, grades 1-12, and supplemented the tests by interviews with boys above the 5th grade. He was interested in finding out what changes take place in boys' ranking of the offenses in successive grades. From the results, he drew generalizations to the effect that changes that do occur from grade to grade in the ranking of offenses are not haphazard but regular and perhaps predictable. From the fifth grade on, the changes were very slight, indicating that whatever concept of property rights is responsible for these judgments is relatively stable by that time. Eberhart attempted to group the items into four categories of ownership: property in the home, lost property, property having many owners, and property owned by one person. However, he found that the offenses in each category did not behave alike so no generalizations could be drawn.

In this study, guided by the hypothesis that the majority of adults operate on a principle differentiating private from corporate property and that this is due to the factor of social distance, the following questions were raised:

1. To what extent do children differentiate, verbally at least, between stealing from a corporation and stealing from a private individual?
2. What are the reasons children give for excusing some acts of stealing and condemning others?

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3. Of the various rationalizations children give for stealing, which are most frequently employed?
4. What do children reveal concerning the relative or absolute nature of their moral judgments in the test situations presented?

PROCEDURES

Preliminary interviews were held in order to locate the types of situations in which junior high school students might find themselves, and which would involve stealing property individually owned and property owned by a corporation. As a result of these interviews, five pairs of stories were composed; one story in each pair involved stealing private property, the other involved stealing corporate property. For each pair, a rationalization for the theft was presented. Thus, in the first pair of stories, the need of the individual who was stealing was given as an excuse; in the second pair, the thief knew he could get away with it; in the third pair, the prosperity of the owner whose property was stolen was stressed; in the fourth pair, the negligible worth of the article was mentioned; in the fifth pair, the fact that everyone was doing it was emphasized. Following each pair of stories, students were asked to tell which boy or girl in the stories did the worse thing, and why. The stories were presented as a written test to a total of 184 junior high school students, eighth and ninth graders in a mid-western community, drawn mainly from the lower and middle classes. One hundred and two of these were boys, 82 were girls. Students were told not to write their names on the papers, and the directions accompanying the test were read orally. Papers were collected in such a way that identification was possible. These were the stories:

I

Mary's father had been out of work for some time and there had been no money to buy lunches at school. One day she helped herself to a dime on a neighbor's desk at school. She remembered how much she needed money and thought it would be OK.

Jim's father was very poor and he had no money for school supplies. One day when he was in the Western Union Telegraph Co. where he worked after school, he saw the cash box out on the desk and helped himself to ten cents. He figured he needed it so much it was all right.

Who did the worse thing, Jim or Mary?

Why do you think so?

II

Harry was the last one getting dressed after gym one day and noticed a pair of tennis shoes hanging out of one of the lockers. There

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was no one around and so he helped himself to them. He knew most tennis shoes looked alike and that he could get away with them.

Donald worked after school for a large corporation where rubber goods were made. One night when it was quitting time he slipped a pair of rubbers inside his jacket. He knew he would be safe in doing this for no one had seen him.

Who did the worse thing, Donald or Harry?

Why do you think so?

III

Michael worked in a tool and die factory which was a large corporation. In the evenings he worked at home at his work bench. He needed a wrench for his tool kit, and at the factory one day he took a wrench to use at home. He thought that the corporation was prospering and allowed for a certain amount of loss anyway.

Bill was fixing a wagon and he needed a screw driver to work on the wheel. He remembered seeing one on Mr. Walker's lawn. Mr. Walker was the wealthiest man in town, and Bill thought he could easily buy another one. So he took the screw driver from Mr. Walker's lawn.

Who did the worse thing, Bill or Michael?

Why do you think so?

IV

Harriet's neighbor had some boxes piled high with scraps of cloth outside her porch. Harriet needed some cloth to make doll's clothes and so she helped herself. She knew the scraps weren't worth much.

Mary lived near a large factory that manufactured cotton goods. She wanted to make some doll clothes so she took some pieces of material from boxes piled outside the factory. She thought it was all right because they weren't worth much.

Who did the worse thing, Mary or Harriet?

Why do you think so?

V

William worked for a large lumber corporation on Saturdays. There were pieces of lumber piled up in the yard to which the workers often helped themselves. William took some lumber home with him. He thought it was all right because everyone else did it.

Some boys and girls always stopped by the corner grocery store owned by Mrs. Moore in the afternoons to buy candy or soft drinks. They would sometimes pick up things that didn't amount to much

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as they walked out. Sarah saw that everybody else did it so she took something too.

Who did the worse thing, Sarah or William?

Why do you think so?

RESULTS

Results will be discussed in relation to the questions raised which this study attempted to answer.

1. To what extent do children differentiate, verbally at least, between stealing from a corporation and stealing from a private individual?

TABLE I

PERCENTAGE OF RESPONSES OF 184 EIGHTH AND NINTH GRADERS FOR EACH OF FIVE PAIRS OF STORIES INVOLVING STEALING FROM A PRIVATE INDIVIDUAL AND FROM A CORPORATION

1P*	1C**	2P	2C	3P	3C	4P	4C	5P	5C
44%	56%	71%	29%	42%	50%	52%	48%	83%	17%

*P — Personal

**C — Corporate

Analysis of the data collected on the tests showed that 52 per cent of the students thought stealing property individually owned was worse than stealing from a corporation. Thirty-six per cent thought stealing from a corporation was worse, while 12 per cent indicated that both offenses were the same.

There was little difference between boys and girls with respect to difference in attitudes toward stealing property individually owned and stealing corporate property. Fifty-four per cent of the boys, as compared with 50 per cent of the girls thought stealing private property was worse; 35 per cent of the boys and 39 per cent of the girls indicated that stealing corporate property was worse, while 11 per cent of both sexes thought there was no difference between the two kinds of offenses.

While answers to the question of which was worse in a pair of stories indicated that a majority of students considered stealing property individually owned to be worse than stealing corporate property, a study of answers to the individual stories revealed some interesting data as can be seen in Table I. In two of the five pairs of stories, attitude toward personal proper-

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ty was in striking contrast to attitude toward corporate property. These were pairs II and V. Pair II, it will be recalled, involved stealing tennis shoes and a pair of rubbers; 71 per cent of the students thought stealing the tennis shoes from a fellow classmate to be the worse offense while only 29 per cent considered stealing a pair of rubbers from a large corporation

TABLE II
PERCENTAGES OF REASONS ACCORDING TO CATEGORY
WHICH 184 EIGHTH AND NINTH GRADERS GIVE TO
EXPLAIN JUDGMENTS ABOUT STEALING FROM
A PRIVATE INDIVIDUAL AND FROM
A CORPORATION

	REASONS	PERCENTAGE
Category I	Need of the owner	32
II	Personal vs. corporate	18
III	Theft not necessary	13
IV	Possible punishment	12
V	Habit-forming	7
VI	Relative worth of the articles	5
VII	Danger of being caught	4
VIII	Carelessness of personal owner	3
Miscellaneous		5

to be the worse. In Pair V, involving stealing unnamed articles of negligible value from a store owned by an individual and stealing scrap lumber from a lumber corporation, 83 per cent thought the first offense the worse while only 17 per cent mentioned stealing the scrap lumber as the worse. Yet in Pair IV, there was only a four per cent difference between the attitude expressed toward private property and corporate. Further comment on these differences will be reserved for a later section of this report.

In two of the five pairs of stories, stealing corporate property was considered worse than stealing property privately owned. In Pair I, 44 per cent of the children considered stealing a dime from a classmate to be the worse offense, while 56 per cent of the children considered stealing from Western Union to be worse. In Pair III, 42 per cent of the students said that stealing a tool from an individual was the worse offense while 58 per cent considered stealing from a corporation was worse. Here, again, comment on these differences will be reserved for a later section of this report.

2. What are the reasons children give for excusing some acts of stealing and condemning others?

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3. Of the various rationalizations children give for stealing, which are most frequently employed?

4. What do children reveal concerning the relative or absolute nature of their moral judgments in the test situations presented?

It will be recalled that after each pair of stories on the test children were asked the why of their decision as to which of the two offenses was the worse. It was hoped that not only might this shed light on some of the reasoning behind children's choices, but also reveal something of the nature of their moral development. Therefore, analysis was made to see whether the majority of judgments expressed was amoral in character, or whether it showed an absolute or a relative position with regard to what was right and wrong.

The reasons which students gave for their choices were categorized. Two workers independently classified the responses of the children under the categories presented, and an agreement of 90 per cent was found. The categories will be discussed in the order of the frequency with which they were mentioned. Results by category are shown in Table II.

Category I—Need of the owner

The largest percentage of responses, 32 per cent, fell under the category of need of the owner. This category included responses such as:

The neighbor needs the scraps for a quilt.

The lady needs the stuff to make a living.

He might need the tool to fix something.

The company needs the lumber for their business.

Of the responses in this particular category, the personal property owner was felt to have the greater need. Where need was mentioned as the rationalization for stealing, 76 per cent of the responses favored the personal property owner. There were some interesting answers favoring the company, however. Where the company was named as needing the object it was usually because the theft interfered with the manufacturing process. For this reason, stealing tools or raw materials was very bad, much worse than stealing finished goods, because it might interfere with the production of goods and might even throw a man out of work because he wouldn't have the proper tool with which to do his job. This was true in Pair III where more responses favored the corporate owner because taking a tool interfered with production, and Pair IV where almost as large a number of responses favored corporate as compared with private ownership because the scraps of cloth left outside the factory were probably needed by the company in manufacturing cotton goods.

Category II—Personal vs. corporate

The second largest percentage of reasons—18 per cent—included reasons which contrasted personal ownership with corporate ownership, in almost

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every instance to the benefit of the personal owner. Excuses for condoning stealing from a corporation were usually expressed in such terms as these:

The corporation makes allowances for stealing; a person doesn't.

The company had plenty; Mr. Jones had only one tool.

A company can always get more; a person might not.

Stealing from a company isn't stealing from anyone.

Stealing from a friend is worse than stealing from a company.

He's working for the company so he has a right to take it.

Category III—Theft not necessary

This very interesting category accounted for 13 per cent of the reasons students gave for excusing theft. It was applied in 58 per cent of the cases to stealing from private property. Implied in the explanations was the idea that it is always possible in our culture to get what one wants by legitimate means. One could work for it, or wait until one's father had a job, or ask the owner for it, or buy what was needed, or decide the particular object wasn't necessary.

Category IV—Possible punishment

The fear of more severe punishment was given in 12 per cent of all cases for stealing from corporate property and in 42 per cent of the cases for choosing one kind of theft as against another. In most all cases, punishment by a corporation was more to be feared than punishment by an individual. A corporation could "fire you," "make you do time," "send you up for a stretch," "fine you or your parents hundreds of dollars," or so the students said. Where a well-known and powerful company was specifically named, as was Western Union in the first pair of stories, fear of punishment seemed to be stronger. To be feared in the case of stealing from an individual was one's reputation; one would be punished by losing face with one's group.

Category V—Habit-forming

Seven per cent of the responses condemned a particular kind of stealing as being habit-forming. Stealing personal property was considered to be more habit-forming than stealing corporate property, in the majority of cases where habit-forming was mentioned. This was particularly true in the case of stealing tennis shoes left outside the locker, and in stealing things from a small grocery store.

Category VI—Relative worth of the articles

Category VII—Danger of being caught

Category VIII—Carelessness of personal owner

In these three categories, percentages of total responses were small. Five per cent mentioned relative worth of the articles; four per cent were con-

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cerned about being caught in the act; three per cent expressed a rather cynical attitude that if the owner were careless enough to leave personal property hanging around, he deserved the loss.

CONCLUSIONS

An attempt will be made to pull together some of the findings with regard to junior high school students' attitudes toward stealing private property as compared with stealing corporate property.

1. The generalized factor of who owns property—corporate vs. private—would appear to influence children's judgments about stealing a particular item.
2. Where children condone stealing corporate property rather than private, two factors are in evidence. One is that many children of junior high school age have a strong fear of large corporations; they believe that corporations do more checking on supplies, and that they punish theft more severely. Where a corporation was specifically named—as in the case of Western Union—the prestige and accompanying fear of this company was a powerful deterrent to stealing. The other factor is that a theft which supposedly interferes with production, as in the case of a tool, is considered to be more serious than stealing manufactured goods.
3. Children give a variety of reasons for condemning one kind of theft and condoning another. The reason most frequently given had to do with regard for the owner, either for his need for the article stolen or for his feelings. This need or these feelings were most frequently attributed to a private owner rather than to a corporate owner. This reason represented an application of the Golden Rule and in that respect might be considered to be of a high moral nature.
4. A small percentage of students of junior high school age (12 per cent) maintain an absolute standard with regard to stealing. For these students stealing is stealing; it is never right under any circumstances to take property belonging to another. Their strict consciences make them reject relativism in the field of morals.
5. Another group of students might be considered to be amoral with regard to attitude toward property. These are the students who indicate an underdevelopment of conscience in that they would refrain from stealing only if there were a possibility of their being caught and punished; that it is all right to steal if the owner of the property is careless enough to leave it lying around; that stealing articles that are not considered to be of much value is not really stealing. Twenty-four per cent of the reasons given by children might be classified amoral in this way.

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6. The remainder of the students reveal the relative nature of their moral judgments by their responses to the socio-moral judgment test. More than 66 per cent of the reasons were of this nature.

SUMMARY

A test of judgment about stealing corporate property as compared with private property was given to 184 eighth and ninth graders. The test consisted of five pairs of stories describing acts of stealing, and children were asked to state in each case which was the worse offense. Results showed that children consider stealing private property more serious than stealing corporate property except where reprisal by a strong, powerful company was feared, or where the theft slowed up production. According to the classification used by the writer, almost a quarter of the reasons children give for stealing are amoral; more than a tenth of the children have very strict consciences with regard to stealing, and approximately two-thirds are relativists in their moral judgments.

Certain implications as well as reservations regarding this research should be pointed out. First of all, it should be clearly recognized that children's judgments regarding stealing are not an indication of what their actions in a particular situation might be. No claim is made here that children's responses to the test stories predict what children will do. Indeed, there is a likelihood that the reasoning of some students, "If you work for a company it's OK to take things from it" might make for more acts of stealing as these same students go to work in industry.

A second reservation has to do with the fact that over half of the students involved in this study were lower-class children. Further investigation involving more upper-class students and analyzing the results from a class viewpoint needs to be done. It may be that lower-class children present different reasons for judging an act of stealing than middles and uppers because lowers have greater reason to fear powerful companies and to fear losing a job. Uppers may present more traditionally moral reasons in giving their judgments about stealing.

What this study implies for the teaching of moral values is not quite clear. Certainly it would appear that home, church and school need to recognize the distinction being made by some children between private and corporate property. Yet in the interviews with students, this writer had the feeling that those who responded to the test items in absolute terms—"Stealing is stealing under all circumstances"—did not have the final answer. This again is in the nature of speculation, but reports by those who knew the "absolutists" were agreed that these were the students who in other aspects of their lives revealed rather rigid personalities. A return to an acceptance of fixed and eternal truth under modern conditions of living is neither feasible nor practical. In the writer's opinion, research on what are the conditions under which modern man can be moral is sorely needed.

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A FACTORIAL STUDY OF THE FELS PARENT BEHAVIOR SCALES

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The application of methods of multiple factor analysis to problems of the description of personality at the adult and near-adult level is beginning to give a clearer picture of the basic variables involved, and their interrelations. The work of Thurstone, Cattell, Guilford, and many others is resulting in a definition of personality variables at the adult level which seem likely to be of central importance for future studies of personality development throughout childhood, and for studies of the effects of various methods of treatment during childhood on eventual personality makeup. Cattell's (4) recent book in particular, with its extensive collation of results from a wide variety of factor studies, indicates the prospect of the discovery of basic personality variables which will receive the general acceptance now accorded some variables in the ability area. Further work on methods of measurement, on techniques of analysis, and on stability and change of behavior at the adult level, can be expected to result in a set of some twenty or thirty variables or "traits," in terms of which a comprehensive and meaningful cross-sectional description of personalities in any specific population of adults can be given.

For a population of children, prediction of adult status on this set of descriptive variables can be made in two ways: (1) by the extrapolation forward in time of measured characteristics of the children, and (2) by use of the total complex of extra-child variables which may be related to personality development, such as characteristics of the parents, of the culture, the neighborhood, the educational system, etc. For prediction of the future development of intelligence, the first of these methods is most effective, at least from the age of six years. For personality development, this forward extrapolation has proved less nearly adequate than in the case of intelligence, and more attention is consequently directed toward the complex of background variables, which includes all the extra-individual influences on behavior.

The extra-child variables which are potentially predictive are both numerous and complexly interrelated. They may be considered as forming a single total set, which, when properly weighted for each adult trait, will give optimal predictions. The intercorrelations of these independent variables will, if known, constitute the matrix of predictor variables in a multiple correlation setting, where the predictants are the dependent variables. Experience in other predictive situations of this type indicates that the use of factor analysis procedures on parts of the matrix of predictor variables

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will produce gains comparable to those obtained in the analysis of personality traits.

Identification of the factors present, which will usually be definitely smaller in number than the initial set of variables, and the determination of their structure, simplifies the making of estimates concerning the behavior of the total set of variables in a multiple correlation setting. Such study frequently discloses the extent to which a set of measures gives adequate coverage of the predictor area concerned. It is frequently found that variables which were intended to measure one thing are actually measuring something else, which is already covered by other measures, with a consequent over-coverage of some areas and a corresponding inadequacy of coverage in others. The conceptual simplification resulting from a reduction in the number of variables may also suggest new and additional variables which were not included in the original scheme. In either of these cases, the development and use of new measures is indicated, if maximal prediction is to be obtained.

Within the total pattern of variables related to personality development, the sub-set relating to various aspects of family life has been widely recognized as important. However, little effort was directed toward the systematic description of these family variables prior to the series of studies (2, 3, 5, 6) from the Fels Research Institute. Using a rating scale developed by Champney (5, 6), a home visitor rated each home in a population whose children were also being studied in other ways, on thirty items of parent behavior, parent-child relationships, home atmosphere, etc. Intercorrelations of these thirty variables for 125 cases, all rated by the same home visitor, are given by Baldwin, Kalhorn and Breese (2), who also present an informal classification of variables into clusters or syndromes.

In common with other studies in which a visitor has observed children and parents in home settings, these data are subject to the limitation that they depend on the observations of only one person. There would be some variation in the resulting statistical values if a different person had made the ratings. There is also some indication of variations in item intercorrelations with age of the children (3). While these limitations are recognized, it has seemed desirable to make a formal factor analysis of these intercorrelations (2, pp. 12-13). This should result in an improved definition of the basic variables involved, and should assist in estimating how the total set of thirty scale items would behave against any set of criteria in multiple correlation. It should also give an improved basis for judging adequacy of coverage of the parent-family region so far as predictor variables are concerned.

The population of families studied is described (2) as somewhat above average in intelligence, economic status, and educational experience; however, it includes some families of less than average educational and economic level. Indications are that about twenty per cent of the fathers are engaged in college teaching, and that about thirty per cent are farmers; the

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remaining half are in other occupations. This is not, of course, a representative sample of any total population, but it is definitely broader in range than most populations used in personality studies. Its chief peculiarity is an over-loading at the professional end of the socio-economic scale.

The Fels Parent Behavior Scales were developed by Champney (5, 6) in an attempt to cover what he called the "eight basic categories or 'armchair factors'" of parent behavior. These eight "armchair factors" may be briefly described as follows:

1. *Freedom—Arbitrary Control.* Child free to act *vs.* child restrained by autocratic control.
2. *Stimulation—Neglect.* Child constantly subject to attention, affection, etc. *vs.* child neglected, ignored, etc.
3. *Babying—Adulting.* Everything done for child; treated as baby *vs.* encouraged to do things for himself, treated as adult.
4. *Maladjusted—Well-adjusted.* Home is erratic, discordant, tense, etc. *vs.* home is harmonious, relaxed, pleasant, etc.
5. *Approving—Deprecating.* Child typically praised, etc. *vs.* child is typically blamed, disapproved, etc.
6. *Rational—Non-rational.* Attitude toward child is logical, intellectual, etc. *vs.* attitude is expedient, emotional, etc.
7. *Training—Free Growth.* Parent pushes child for rapid development by teaching, training *vs.* parent makes no effort to accelerate child's development.
8. *Socialized—Individualized.* Home is characteristically friendly, sociable, etc. *vs.* home is characteristically reclusive, isolated; characterized by privacy, private property, etc.

Rating scales for thirty types of family characteristics were developed from these eight categories. Each scale has either five or six cue statements defining the variable to be rated. In the present study, the directions of certain scales were reversed by changing the signs of their correlations with other items, to maximize the number of positive elements in the correlation matrix. Items so reversed were 3, 9, 10, 11, 16, 17, 18, 22, 28; all these as presented in the list below have "non" prefixed to them, and the defining terms shifted accordingly. The total list of scales is as follows (5).

1. Adjustment of home: well-adjusted—maladjusted
2. Activeness of home: active—inactive
3. Non-discord in home: harmony—conflict
4. Sociability of family: expansive—reclusive
5. Coordination of household: coordinated—chaotic
6. Child-centeredness of home: child-centered—child-subordinated

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7. Duration of contact with parent: extensive contact—brief contact
8. Intensity of contact: vigorous—inert
9. Non-restrictiveness of regulations: freedom—restriction
10. Non-readiness of enforcement: lax—vigilant
11. Non-severity of actual penalties: mild—severe
12. Justification of policy: rational—arbitrary
13. Democracy of policy: democratic—dictatorial
14. Clarity of policy: clear—vague
15. Effectiveness of policy: successful—unsuccessful
16. Non-disciplinary friction: concordant—contentious
17. Non-readiness of suggestion: non-suggesting—suggesting
18. Non-coerciveness of suggestion: optional—mandatory
19. Accelerational attempt (pushing): acceleratory—retardatory
20. Babying: overhelps—withholds help
21. Protectiveness: sheltering—exposing
22. Non-readiness of criticism: uncritical—critical
23. Favorableness of criticism: approval—disapproval
24. Readiness of explanation: satisfies curiosity—thwarts curiosity
25. Solicitousness for child's welfare: anxious—nonchalant
26. Acceptance of child: devotion—rejection
27. Understanding of child's problems: keen—obtuse
28. Non-emotionality toward child: objective—emotional
29. Affectionateness toward child: affectionate—hostile
30. Rapport with child: close rapport—isolation

Seven factors were extracted by Thurstone's multiple-group method (8); the factor loadings so obtained are shown in Table 2. After the extraction of the seventh factor there was only one residual (.11) larger than $\pm .10$, and there was no discoverable patterning in the residuals which fell within that range, so no further extraction was made.

These axes were rotated to an oblique simple structure by the single-plane method. The complete rotated factorial matrix is given in Table 5. A summary of the rotated factor matrix is shown in Table 1, which contains all factor loadings of .30 or above.

The transformation matrix is shown in Table 3, and the matrix of correlations between the factors is given in Table 4.

INTERPRETATION

In the following discussion of the interpretation of each factor, all variables which have loadings of .30 or more, regardless of sign, are listed in order of size of loading. Variables with loadings over .50, which are referred to as "defining variables," are described in some detail. All but two of these have no loading as high as .30 on any other factor, so that they are predominantly one-factor variables in the present context.

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TABLE I
SUMMARY OF FACTOR LOADINGS

	I	II	III	IV	V	VI	VII
<i>Factor I: Concern for child</i>							
7 Contact duration	69						
21 Protectiveness	69						
20 Babying	63						
6 Child-centered	57						
25 Solicitous	53				-36		
26 Acceptance	39			31			
4 Family sociable	-37				70		-41
9 Non-restrictive	-37	32	35		32		
<i>Factor II: Democratic guidance</i>							
12 Justification		64					
13 Democracy		62					
24 Explanation		62					
18 Non-coercive		61					
27 Understanding		43			33		
14 Clarity policy		38					
19 Accelerational		36				36	
23 Favorable criticism		34					
28 Non-emotional		33		33	-35		
9 Non-restrictive	-37	32	35		32		
<i>Factor III: Permissiveness</i>							
11 Non-severity			61				
10 Non-enforcement			51				
9 Non-restrictive	-37	32	35		32		
<i>Factor IV: Parent-child harmony</i>							
16 Non-friction				63			
15 Effectiveness				61			
3 Home non-discord				42	31		
22 Non-criticism				41			33
30 Rapport				40			
28 Non-emotional		33		33	-35		
26 Acceptance	39			31			
<i>Factor V: Sociability-adjustment of parents</i>							
4 Family sociable	-37				70		-41
1 Home adjustment					55		
25 Solicitous	53				-36		
28 Non-emotional		33		33	-35		
27 Understanding		43			33		
29 Affectionate					32		
9 Non-restrictive	-37	32	35		32		
3 Home non-discord				42	31		
<i>Factor VI: Activeness of home</i>							
2 Home active						76	
5 Coordination						53	
19 Accelerational		36				36	
<i>Factor VII: Non-readiness of suggestion</i>							
17 Non-suggestion							58
4 Family sociable	-37				70		-41
8 Intense contact							-34
22 Non-criticism				41			33

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I. The variables with loadings above .30 on the first factor are as follows:

7. Duration of contact with parent: extensive contact—brief contact69
21. Protectiveness: sheltering—exposing .....	.69
20. Babying: overhelps—withholds help .....	.63
6. Child-centeredness of home: child-centered—child-subordinated .....	.57
25. Solicitousness for child's welfare: anxious—nonchalant ....	.53
26. Acceptance of child: devotion—rejection .....	.39
4. Sociability of family: expansive—reclusive .....	.37
9. Non-restrictiveness of regulations: freedom—restriction ....	.37

An examination of the cue statements of the defining variables will assist in interpreting this factor. "Duration of contact with parent" refers simply to the estimated daily amount of actual contact with the child, ranging downward from "Entire waking day together" to "Quarter hour per day together." Cue statements at the ends and from the middle of the scale for the other four items are as follows.

21. Tends to shelter child from every imaginable slight discomfort or difficulty.	Lets child face own obstacles when there is no danger of lasting harm.	Allows child to be exposed to major hazards, dangers, problems, suffering, oblivious to hazards, or deliberately refrains from protecting child.
22. Continually helping child, even when child is fully capable and willing.	Helps when needed, but not when child can get by alone.	Leaves child alone to solve even major problems, often refusing aid when requested.
6. Whole household revolves around child; many major sacrifices for child's trivial comforts.	Child gets proportional consideration; is as often disregarded as sacrificed for.	Household organized around interests of other members. Child definitely neglected even in essential matters.
25. Given to severe, irrational anxiety on largely imaginary grounds. Readily panicked.	Somewhat solicitous, but minimizes hazards. Frequently shows concern, but without losing perspective.	Nonchalant and seemingly unconcerned even in major matters. So unsolicitous as to appear neglectful or irresponsible.

For three of these items, 21, 20 and 6, the item intercorrelations are almost as high as the correlations between successive ratings on the same item, which indicates that, as rated, they are practically parallel measures of the same thing. The content of the set of all five defining items seems very close both to the second of Champney's original categories, "Stimulation—Neglect," which contrasted situations in which "Child constantly subject to at-

tention, affection, suggestion, concern, action" with "Child left to his own devices, neglected, ignored, under-stimulated," and to the third category, "Babying—adulging." These same items appear together in one of Baldwin, Kalhorn and Breese's clusters which they call "Indulgence."

This seems clearly to be related to sorts of behavior commonly considered in relation to "security—insecurity" within the family, and, at the extremes of the scales, to concepts of "rejection" and "overprotection." A common thread running through these variables is concern for the child with accompanying actions, from overconcern, overprotectiveness, overanxiety, etc., through more moderate degrees of concern to complete indifference, neglect, etc. It is one of the two factors on which the variable "Acceptance of child" has a loading over .30. It seems to have more of an emotional component than the term "stimulation" would imply, and the defining statements at the upper end seem clearly to indicate a more positive intervention in the child's affairs than would be indicated by "indulgence." Although it does not quite cover the "action" part of these variables, this factor will be called "Concern for the child."

Both extremes of these variables, intense overconcern and neglectful indifference, are frequently taken to indicate some type of parental maladjustment. To the extent to which ratings at either end of these scales were associated with "low" ratings on such variables as "I. Adjustment of home," the relation between the variables and the rating on adjustment would be non-linear, and a correlation coefficient would not indicate accurately the degree of relationship. Insofar as the variables of this factor are parallel measures, their interrelations would still be linear, so that the main effect of non-linearity of relationship with variable 1 and other items would be to produce a lower value for the correlations between factors than would otherwise be obtained.

II. The variables with loadings above .30 on the second factor are as follows:

12. Justification of policy: rational—arbitrary .....	.64
13. Democracy of policy: democratic—dictatorial .....	.62
24. Readiness of explanation: satisfies curiosity—thwarts curiosity .....	.62
18. Non-coerciveness of suggestion: optional—mandatory .....	.61
27. Understanding of child's problems: keen—obtuse .....	.43
14. Clarity of policy: clear—vague .....	.38
19. Accelerational attempt (pushing): acceleratory— retardatory .....	.36
23. Favorableness of criticism: approval—disapproval .....	.34
28. Non-emotionality toward child: objective—emotional33
9. Non-restrictiveness of regulations: freedom—restriction....	.32

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Cue statements for the defining items are as follows. Since they do not show quite the same type of transition from too little to too much that the items of the first factor did, only the upper and lower cues are listed.

- | | |
|---|---|
| 12. Goes out of way to show child practical reasons behind requirements and suggestions, even in emergencies or where explaining is difficult. | Never explains policies to child. Handles discipline in very arbitrary fashion, expecting child never to question "why." |
| 13. Endures much inconvenience and some risk to child's welfare in giving child large share in policy forming. Consults with child in formulating policies wherever possible. | Dictates policies without regard to child's wishes. Never consults child when setting up regulations. |
| 24. Never too busy to answer child as adequately as possible. Anticipates questions. Encourages curiosity with willing explanations. | Thwarts child's curiosity. Actively discourages questions with "Too busy," "You're too young to know," "Just because," etc. |
| 18. Commands resorted to only in life and death emergencies. Parent goes out of way to avoid coercion in his suggestions to child. | Efforts to control child take form of peremptory orders, to be obeyed at once, even in trivial matters. |

The intercorrelations of the four defining variables are almost identical with the correlations between successive ratings on the same item, which indicates that, as rated, they are essentially parallel measures of the same thing. These items represent a second basic normative concept of child development, the positive attempt to encourage independence of thought and action in the child. A description of this general concept is given by Goodenough (7, p. 676).

The second need of the child is opportunity for *unhindered development*. This is not to say that he must not know restraint, that he be allowed to run wild without design or guidance. It means that restriction upon his acts shall not be imposed erratically or without reason, that he be allowed to make his own mistakes as far as this is at all consistent with reasonable attention to his own health and safety. . . . He must be allowed to experiment widely in order that he may choose wisely. It means that he shall not be hampered . . . by unwise indulgence. It means the encouragement of initiative and independence, learning to do for himself and fend for himself.

Such behavior is in the area of Champney's first category, "Freedom—Arbitrary Control" and of the sixth, "Rational—Non-rational." These items occur in one of Baldwin, Kalhorn, and Breese's clusters called "Democracy in the Home." The cue statements also seem closely related to the definition of authoritarian—democratic (but not laissez-faire) methods of social control developed by Lewin and Lippitt.

It should be noted that the cues at the "democracy" end of all four scales emphasize the positive actions taken by the parent to explain the reasons

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for rules, to satisfy curiosity, to encourage the development of independence, and to involve the child in family policy-formation.

This behavior differs from passive permissiveness, which characterizes the variables of the next factor. The authoritarian—democratic—laissez-faire triad splits into two distinct factors in this analysis: democratic—authoritarian and laissez-faire—authoritarian. To emphasize the positive guidance aspects of the present factor, it will be called "Democratic guidance."

III. The variables with loadings above .30 on the third factor are as follows:

- | | |
|---|-----|
| 11. Non-severity of actual penalties: mild—severe | .61 |
| 10. Non-readiness of enforcement: lax—vigilant | .51 |
| 9. Non-restrictiveness of regulations: freedom—restriction | .35 |

Cue statements at the ends and in the center of the scales for the first two items are given below.

- | | | |
|--|---|--|
| <p>11. Most flagrant misbehavior provokes no penalty more severe than weak verbal remonstrance. Penalties are so light that their potency for the child is negligible.</p> | <p>Moderate penalties. Severe enough to have definite motivating power for the child; but not so severe that the child is over-inhibited, severely frightened, or deeply resentful.</p> | <p>Severe penalties, frequently stimulating child to dread, terror, or deep personal resentment.</p> |
| <p>10. Extremely lax. Disregards obvious misbehavior. Enforces regulations only when pressed by the strongest motives or the severest circumstances.</p> | <p>Moderately firm. Strict about important requirements and prohibitions; but rather lax with minor violations, especially when they are not an issue at the moment.</p> | <p>Eternally vigilant. Goes out of way to discover and discipline misconduct. Often pounces before lapse occurs.</p> |

These cue statements range from passive permissiveness (*laissez-faire*) to an "authoritarian" harshness of enforcement of regulations. That the permissiveness is not equivalent to parental indifference is indicated by the fact that variable 29, "Affectionateness," has a loading of .28 on this factor. This is a second factor in the area "freedom—arbitrary control" which is related to, but definitely distinct from, the previous factor, "Democratic guidance." It will be called "Permissiveness."

IV. The variables with loadings above .30 on the fourth factor are as follows:

- | | |
|---|-----|
| 16. Non-disciplinary friction: concordant—contentious | .63 |
| 15. Effectiveness of policy: successful—unsuccessful | .61 |
| 3. Non-discord in home: harmony—conflict | .42 |
| 22. Non-readiness of criticism: uncritical—critical | .41 |

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30. Rapport with child: close rapport— isolation40
28. Non-emotionality toward child: objective—emotional33
26. Acceptance of child: devotion—rejection .....	.31

Cue statements from the ends and from the middle of these scales are given below for the two defining variables.

<p>16. Disciplinary conflicts are exceedingly rare. Either the child conforms docilely, or the parent tranquilly permits lapses. Friction extremely mild or absent.</p>	<p>Parent invokes penalties, child resists, etc. rather frequently, but harmonious adjustment in disciplinary situations is somewhat more usual. Friction moderate.</p>	<p>Situations to which regulations or standards apply are always characterized by overt parent-child conflict. Parental demands resisted. Friction frequent and marked.</p>
<p>15. Child conducts himself in accord with the parents' standards in every respect. Parents' policy achieves its goal.</p>	<p>Policy predominantly successful, although it fails in many instances.</p>	<p>Child's overt behavior is entirely at odds with standards implied in policies of parent. Policy completely unsuccessful.</p>

The correlation between ratings on these two items is as high as the correlations between ratings on the same item at different times, which indicates that they are essentially parallel. They indicate the effectiveness of parental procedures as judged by the parents; they thus refer both to the behavior of the child and to the satisfaction of the parent with that behavior. They include both the amount of conformance of the child's behavior to parental standards, and the type of standards to which the child is expected to conform. The correlation between this factor and the second factor is .63; it is thus closely related to democratic guidance procedures. It is also positively related, though not so highly, to the "Concern" and "Permissiveness" factors. The next three items on this factor are "Non-discord in the home," "Non-readiness of criticism," and "Rapport between parent and child." It seems that an appropriate name would be "Parent-child harmony."

V. The variables with loadings above .30 on the fifth factor are as follows:

4. Sociability of family: expansive—reclusive .....	.70
1. Adjustment of home: well-adjusted—maladjusted .....	.55
25. Solicitousness for child's welfare: anxious—nonchalant ....	.36
28. Non-emotionality toward child: objective—emotional .....	.35
27. Understanding of child's problems: keen—obtuse .....	.33
29. Affectionateness toward child: affectionate—hostile .....	.32
9. Non-restrictiveness of regulations: freedom—restriction ....	.32
3. Non-discord in home: harmony—conflict .....	.31

Cue statements for the ends of the scales of the first two items are given below.

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- | | |
|---|---|
| <p>4. Family constantly active socially; always seeking new contacts; eager and uninhibited mixers.</p> | <p>Family resents social advances from outside the household; never mixes socially.</p> |
| <p>1. Exceedingly well-adjusted. Characterized by pleasant cooperation, security, and full satisfaction throughout.</p> | <p>Extremely maladjusted; torn with conflict, repression, and insecurity.</p> |

These two items are not so closely parallel in their behavior as are most of the other sets of defining variables, and it is possible that one or more additional factors would emerge with the inclusion of additional measures of variables of this type. Negative ends of the two scales represent in one item extreme social withdrawal, and in the other excessive conflict, etc. These have something in common, but are not exactly parallel. The same is true for the positive cue statements. The item intercorrelation between these is .59, which is markedly below the correlations for each item on successive ratings. To recognize that these defining variables are less similar than most of the other sets, and to give emphasis to each of these defining items, this factor will be called "Sociability-adjustment of the parents."

It is interesting that the item with the next highest loading on this factor is "Solicitousness," (— .36).

VI. The variables with loadings above .30 on the sixth factor are as follows.

- | | |
|--|-----|
| 2. Activeness of the home: active—inactive | .76 |
| 5. Coordination of household: coordinated—chaotic | .53 |
| 19. Accelerational attempt (pushing): acceleratory—retardatory . | .36 |

Cue statements from the ends and the middle of the scale for the first two items are given below.

- | | | |
|---|--|--|
| <p>2. Home extremely bustling, busy, excited, tense.</p> | <p>People move, talk, and work without haste, but with some dispatch. Home alert, but not hypertense.</p> | <p>Home poky, lackadaisical, lazy, slow-moving, procrastinating.</p> |
| <p>5. Extremely effective management. Model of efficiency. Long-range planning, flexibly executed. Confusion unknown.</p> | <p>Fair coordination. Considerable disorder, but can usually find things. Buying inefficient, but meals fairly adequately planned. Sometimes off schedules, but never miss trains.</p> | <p>Chaotic, disorganized. Nothing happens on schedule. No planning. Equipment in tangled scramble. Confusion reigns, even in essentials.</p> |

This is a second "home" factor, which seems to be primarily a matter of the drive and effectiveness of the parents, without specific reference to children. These variables were listed in a cluster by Baldwin, Kalhorn and Breese; so far as is known, it has not previously been discussed formally as a family variable. It will be called simply "Activeness of the home," after the variable with the highest loading.

VII. The variables with loadings above .30 on the seventh factor are as follows:

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17.	Non-readiness of suggestion: non-suggesting—suggesting ..	.58
4.	Sociability of family: expansive—reclusive41
8.	Intensity of contact: vigorous—inert .....	.34
22.	Non-readiness of criticism: uncritical—critical .....	.33

The end and middle cue statements for variable 17 are given below.

<p>17. Parent not only consistently avoids volunteering suggestions, but tends to withhold them when they are requested, or when they are the obvious reaction to the immediate situation.</p>	<p>Parents' tendency to allow child's initiative full scope is about equal to tendency to interfere by making suggestions.</p>	<p>Parent continually attempting to direct the minute details of the child's routine functioning, and "free play" as well.</p>
--	--	--

The instructions for this item also direct "This does not apply to routine regulations and their enforcement. Rate only where there is opportunity for suggestion. Note that 'suggestion' is defined broadly, including direct and indirect, positive and negative, verbal and non-verbal, mandatory and optional."

This factor, which is not so well determined as the previous ones, seems to be just what the names of the two items with positive loadings would indicate, a non-readiness to offer suggestions and criticism. It seems to represent a verbal passivity—verbal activity scale. In the absence of additional defining variables, it will simply be named for the item with the highest loading, "Non-readiness of suggestion."

The eighteen items which had loadings of .50 or more on some factor have been discussed in detail as defining variables. The factorial composition of the remaining twelve items can be seen in Table 1, Summary of Factor Matrix, which shows loadings of .30 or more, and in Table 5, Rotated Factor Matrix, which shows all loadings. The factorial composition of some of these "non-defining" variables is interesting. Item 19, "Accelerational attempt," has loadings of .36 on each of the two factors, "Democratic guidance" and "Activity of the home." Item 26, "Acceptance of child," has loadings of .39 on the "Concern" factor and .31 on the "Harmony" factor. Item 9, "Non-restrictiveness of regulations," has loadings of —.37 on "Concern," .32 on "Democratic guidance," .35 on "Harmony," and .32 on "Sociability-adjustment," which indicate that it is factorially complex. Item 27, "Understanding," has loadings of .43 on "Democratic guidance" and .33 on "Sociability-adjustment."

Interrelations of the Factors

The correlations between the primary factors are shown in Table 4. Examination of this indicates that the first four factors, which relate directly to parent-child relations, have positive intercorrelations between .34 and .38

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except for the correlation between the second and fourth factors, which is .63. This has several implications.

- a. A single-variable study of the effect of any one of these factors on any specific form of behavior would include, to a substantial extent, the effects of all of them, and it would be difficult to draw accurate inferences as to causal influence from such a study.
- b. In a multiple-correlation situation, each of them could contribute, depending on the relative size of their correlations with the criterion, but the combined contribution would be less than would be the case if their intercorrelations were closer to zero.
- c. There is some indication of a "general goodness" of parent-child relations running through the four factors.

The relations between these four factors and the last three are also of some interest. The correlations of the "Concern" factor with "Non-readiness of suggestion" is $-.36$. The correlation of the "Democratic guidance" factor with "Sociability-adjustment" is $.32$. The correlation of "Permissiveness" with "Activity of the home" is $-.36$. These are the highest of this particular set of correlations.

DISCUSSION

When the seven factors, in terms of which the thirty original variables are expressed, are considered in terms of their coverage of the family as a source of variables for the prediction of personality outcome generally, it seems apparent that additional measures will be needed. There are, of course, many other potentially relevant variables besides those of the family. However, the set of parent practices does not exhaust the information which can be obtained from the family situation. It is frequently recognized in discussions of parental practices that a discussion of what a parent does, without a consideration of *who* the particular parent is, may lead to somewhat artificial results. The problem of the relations between the types of behavior, practices, etc., which define the seven factors of this study and the intelligence level and personality characteristics of the parents involved, is an interesting one. Some relationships are indicated in reports of the relations between parent practices and socio-economic status. The use of reasoning as a technique of control by parents, has been found (Anderson, 1) to vary significantly with socio-economic status, and thus also, by inference, with intelligence level of parents. Variables defining the "Democratic guidance" factor were found present much more often among faculty families than among farm families (2). It seems likely that a systematic exploration of the personality traits of persons who are parents will both add significantly to the set of predictor variables, and lead to a substantial simplification of the total prediction problem, along the following lines.

If, as is sometimes done in multiple correlation work, that predictor with the highest correlation with the criterion is selected as the first variable, to

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which others are to be added systematically in the predictor matrix, it is frequently found that this first variable is effective enough to make it something of a task to find additional variables which will contribute substantially to the prediction. For example, one such situation is the prediction of academic scholarship, where intelligence or some similar combination of ability measures is treated as the first variable. Another such situation is the prediction of the terminal intelligence level of children from the total set of background and treatment variables. When, for a population of children raised by their own parents, parental intelligence level is taken as the first predictor variable, the finding of additional variables which will augment this prediction has not been easy to do.

In attempting to predict adult status on any given personality characteristic from background and treatment variables, it seems possible that the measure of that same characteristic in the parent may prove to be the most effective first variable in the predictor matrix. This possibility will be discussed more fully in a separate paper. If it should be found to hold for most or for a substantial number of characteristics, the predictive simplification which would result is easily apparent. In any event, these direct parent-offspring trait correlations seem certain to occupy prominent places among the variables predictive of personality outcome, along with parent practices and factors from outside the family situation.

SUMMARY

1. A multiple factor analysis was made of the intercorrelations between the thirty scale items of the Fels Parent Behavior Scales, as reported by Baldwin, Kalhorn and Breese, to find the basic factors present and to determine their intercorrelations. Seven factors were found adequate to account for the original correlations. Five of these refer to parent-child relationships, and two to characteristics of the parents without specific reference to the children.

2. The prospective behavior of these family variables in the multiple-correlational prediction of the development of personality characteristics is discussed, in the light of the seven factors and their interrelations. Consideration of the relations between parent practices and other characteristics of parents leads to the suggestion that the direct measurement of a personality trait of parents may be the most effective single predictor of eventual status in that trait for offspring.

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TABLE 2
UNROTATED FACTOR LOADINGS

	I	II	III	IV	V	VI	VII
1	36	38	16	28	—08	59	17
2	19	20	—13	75	25	04	—05
3	52	41	37	01	—15	33	11
4	04	36	—29	23	02	62	—30
5	25	36	22	63	—07	—05	13
6	84	—16	—01	15	10	00	02
7	68	—20	—06	—07	—06	—15	25
8	69	04	—24	22	10	—09	—39
9	21	67	08	—29	31	19	—16
10	22	—09	—03	—62	48	—04	—11
11	45	11	—01	—35	59	—09	—10
12	47	83	—07	02	—01	—10	—14
13	46	81	00	—12	05	—11	—10
14	36	68	24	35	—16	—14	09
15	59	27	53	14	20	15	—10
16	53	33	63	—02	—03	—10	—10
17	—12	23	22	—14	22	12	56
18	45	79	—05	—04	09	—17	01
19	32	60	—08	51	—17	01	—07
20	77	—20	—16	—10	—10	02	06
21	80	—06	05	16	—18	03	27
22	26	40	55	—27	26	—02	24
23	69	53	03	00	15	—06	15
24	45	78	—14	11	—11	—02	03
25	72	—01	—17	12	—05	—38	—09
26	86	17	23	—05	—03	13	01
27	41	68	—05	—03	—18	35	25
28	17	50	49	—13	—03	—38	09
29	79	25	04	—24	15	25	—12
30	80	18	33	—19	07	19	—02

CHILD DEVELOPMENT

TABLE 3
TRANSFORMATION MATRIX

	A	B	C	D	E	F	G
I	.610	.040	.096	.099	.100	.000	.000
II	-.400	.671	-.038	.000	-.039	.087	.019
III	-.200	-.431	.918	.000	-.102	.000	.059
IV	.038	-.281	.096	.832	-.024	.000	.000
V	-.229	-.361	-.019	.525	.961	.087	.226
VI	-.238	-.391	.210	-.099	.209	.962	-.196
VII	.562	.000	-.306	.119	-.113	-.243	.952

TABLE 4
MATRIX OF CORRELATIONS OF PRIMARY VARIABLES

	I	II	III	IV	V	VI	VII
I	1.00						
II	.37	1.00					
III	.36	.34	1.00				
IV	.38	.63	.36	1.00			
V	.23	.32	-.22	.06	1.00		
VI	.03	.27	-.36	.04	.26	1.00	
VII	-.36	.06	-.14	.11	.26	-.11	1.00

MERRILL ROFF

TABLE 5
OBLIQUE FACTOR LOADINGS¹

	I	II	III	IV	V	VI	VII
1	02	-08	03	27	55	19	04
2	00	-12	26	-01	09	76	00
3	10	06	-09	42	31	-04	03
4	-37	05	20	-03	70	11	-41
5	09	02	-12	23	-05	53	14
6	57	-15	18	09	-01	26	04
7	69	02	-03	-09	-23	02	25
8	24	10	21	-03	01	27	-34
9	-37	32	35	12	32	-10	-10
10	-01	-02	51	-05	03	-26	01
11	05	02	61	00	-01	06	06
12	-08	64	01	-03	01	05	-10
13	-09	62	05	01	-01	-03	-05
14	03	38	-22	21	-11	27	10
15	01	-19	23	61	21	25	-04
16	04	03	-06	63	-05	02	-04
17	02	-03	13	01	02	04	58
18	-01	61	07	-08	-09	08	08
19	-01	36	-15	01	07	36	-10
20	63	02	00	-08	-02	-05	02
21	69	-02	-12	07	-06	15	21
22	-04	03	21	41	-01	-03	33
23	27	34	16	01	-03	17	20
24	04	62	-09	-12	04	08	01
25	53	23	-03	-12	-36	17	-03
26	39	02	05	31	14	02	-01
27	08	43	-11	-04	33	-08	14
28	-05	33	-17	33	-35	-06	19
29	20	10	28	17	32	-08	-12
30	27	-04	15	40	21	-06	-02

¹After rotation, the order of these factors was changed to facilitate their discussion. If a comparison is made with the unrotated loadings and the transformation matrix, the order should be I, II, IV, VI, III, V, VII, instead of the order finally used and shown in this table.

Printed by
THE ANTIOCH PRESS
Yellow Springs, Ohio



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